Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Information

Utilizing Thiol–Ene Coupling Kinetics in the Design of Renewable Thermoset Resins based on *D*-Limonene and Polyfunctional Thiols

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Supporting experimental data:

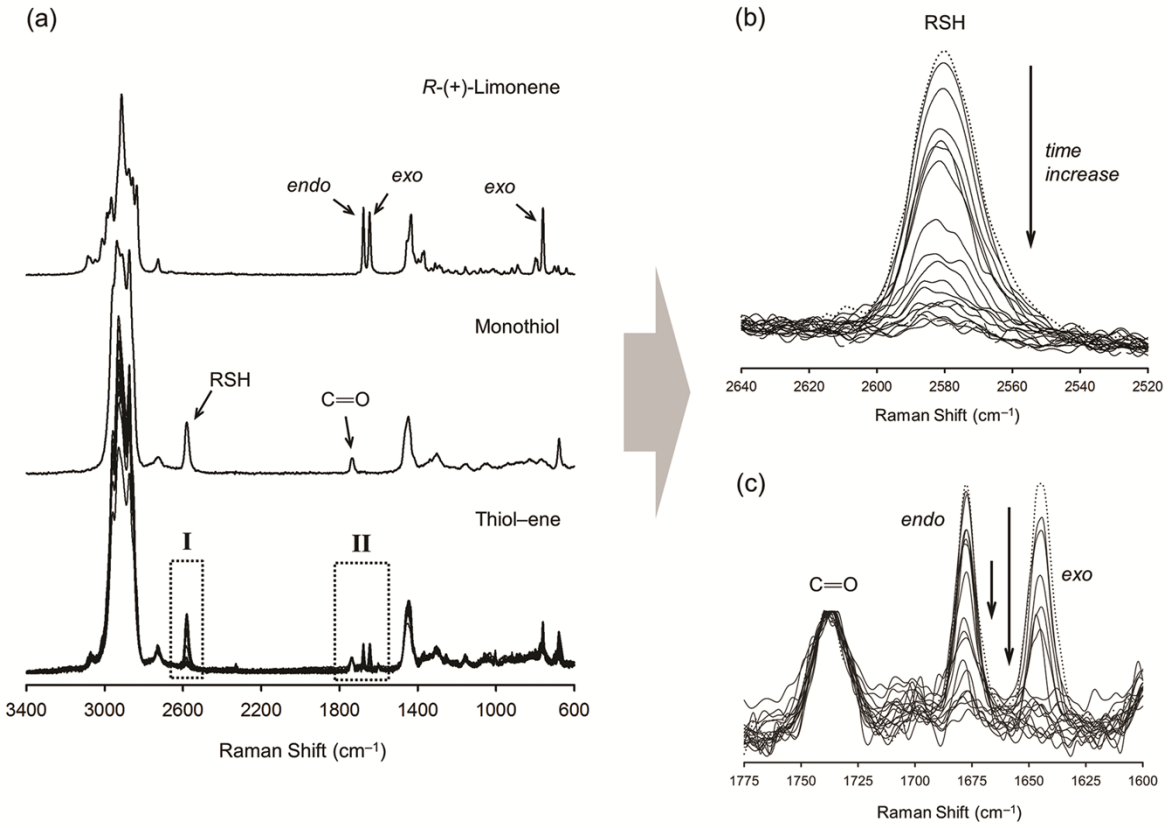

Figure S1. Normalized FT–Raman spectra of samples obtained from photoinduced thiol–ene reaction of monofunctional system mixed on a 1:1 thiol–ene functional group stoichiometry (2:1 thiol–ene molecular ratio). (a) overall kinetic spectra collection in comparison to pure thiol and ene reactants; (b) *zoom-in* of region **I** showing the time-consumption of thiol; and, (c) *zoom-in* of region **II** showing the time-disappearance of individual unsaturations. Dotted line refers to the initial mixture (STM). The carbonyl group (C=O,1735 cm^{-1}) was used as internal reference band in the spectral normalization process. Long arrows denote fast consumption of functional groups whereas the small arrow indicates slow disappearance of endocyclic double-bonds.

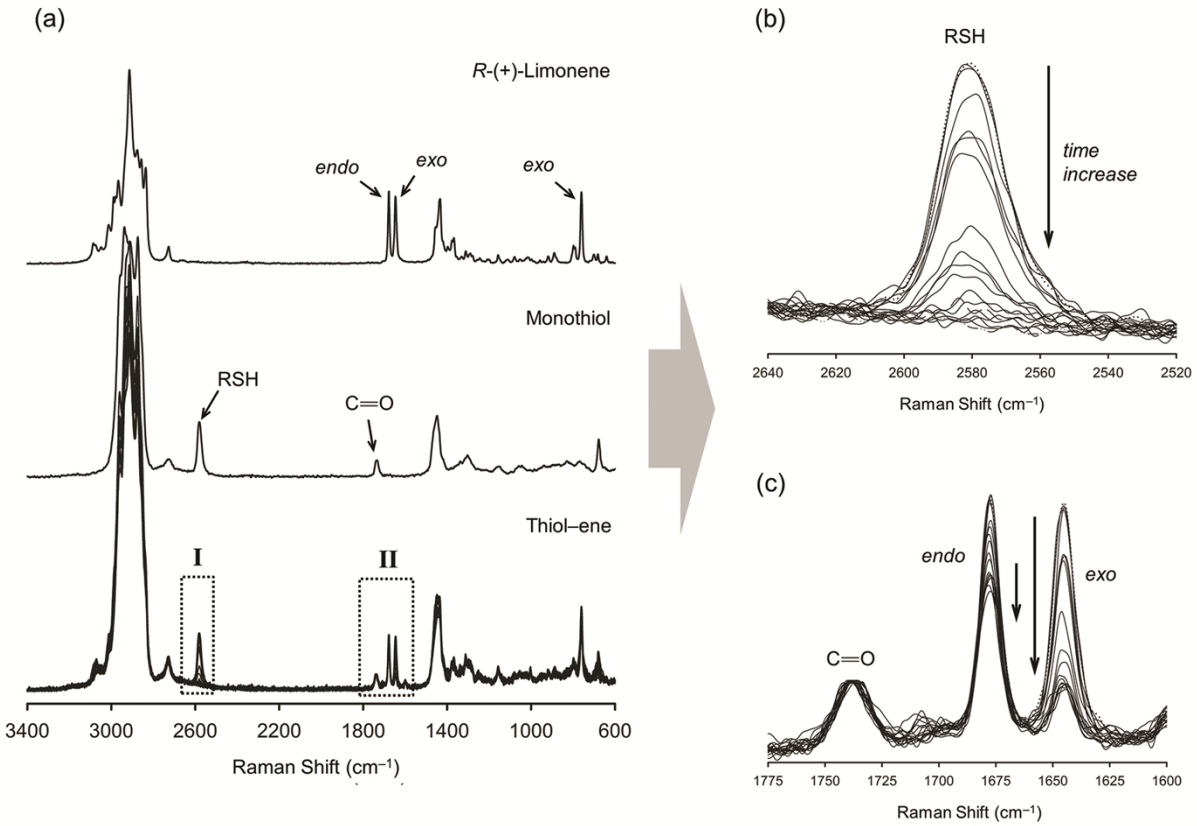

Figure S2. Normalized FT–Raman spectra of samples obtained from photoinduced thiol–ene reaction of monofunctional system mixed on a 1:0.5 thiol–ene functional group stoichiometry (1:1 thiol–ene molecular ratio). (a) overall kinetic spectra collection in comparison to pure thiol and ene reactants; (b) *zoom-in* of region **I** showing the time-consumption of thiol; and, (c) *zoom-in* of region **II** showing the time-disappearance of individual unsaturations. Dotted line refers to the initial mixture (STM). The carbonyl group (C=O, 1735 cm^{-1}) was used as internal reference band in the spectral normalization process. Long arrows denote fast consumption of functional groups whereas the small arrow indicates slow disappearance of endocyclic double-bonds.